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Standardization of Methods of Calculating the Weighting Functions
on the Basis of the Parameters of the Fine Structure of the Absorption
Bands of Atmospheric Gases

Academy of Sciences USSR

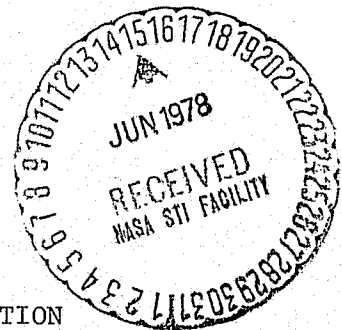
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THE BASIS OF THE PARAMETERS OF THE FINE
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16. Abstract This report concerns Point VII of a list of works conducted by the USSR in accordance with the Joint Soviet-American Research Program on improving methods of heat probes from satellites. Appendix III to the Protocol of the third meeting of the Soviet-American Work Group on space meteorology. Moscow, USSR. November 10-22, 1976. Enclosed are numerous calculations of transmission functions, along with tables.					
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STANDARDIZATION OF METHODS OF CALCULATING THE WEIGHTING FUNCTIONS
ON THE BASIS OF THE PARAMETERS OF THE FINE STRUCTURE OF THE ABSORPTION
BANDS OF ATMOSPHERIC GASES

2.1 Tables of the Transmission Functions

The estimates of the transmission functions for section 2 of the Joint Soviet-American Research Program on improving methods of ~~heat probes~~ ^{Thermal Sounding} from satellites were made in the Moscow Institute of Physics and Technology. In the tables presented below, the results of estimates of the transmission functions are given for the conditions approved in Appendix 2 of the Program. All of the calculations are based on parameters for the fine structure in the 1975 AFCRL catalog.

Table 2.1 Transmission functions of a 15 micron band of CO_2 for the same conditions. The instrument function is the Gaussian function with the half-width given in Appendix 2 of the Program.

Table 2.2 Transmission functions of a 4.3 micron band of CO_2 for the same conditions. The instrument function is the Gaussian function with a half-width of $\Delta\nu = 2.8 \text{ cm}^{-1}$. The gas composition is pure CO_2 .

Table 2.3 Transmission functions for nonuniform conditions for three models of the atmosphere. The gas composition is CO_2 with a level of 330 parts per million. Here and in the following tables are the numbers of the spectral channels:

a) In the area of a 15 micron band of CO_2 : No. 1 - 668, No. 2 - 676, No. 3 - 696, No. 4 - 707, No. 5 - 725, No. 6 - 746 cm^{-1} . The instrument function is a triangle with a base width of 6 cm^{-1} for channel No. 1 and of 24 cm^{-1} for all the remaining channels.

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In the area of a 4.3 micron band of CO₂: No. 1, No. 2, No. 3 ~~correspond~~ correspond to numbers 13, 14, 15 of the satellite radiometer HIRS Nimbus-6. The values of the transmission functions are given for 40 pressure levels in accordance with Appendix 4 of the materials ~~from the materials~~ of the American Side dated March 1, 1977.

Table 2.4 The transmission functions for a standard model of the /2. atmosphere in the USA, 1962, with a CO₂ content of 363 parts per million.

Table 2.5 The transmission functions for three models of the atmosphere, gas composition: CO₂ is 330 parts per million, water vapor is in accordance with the distribution provided by the American Side.

Table 2.6 The transmission functions of ozone for three models of the atmosphere.

2.2 Suggestions by the Soviet Side for Unifying the Direct (linear) Methods of Calculating the Transmission Functions

/3.

Based on methodical studies for improving computer algorithms, ^{and of} improving analysis of the results of calculations and their comparison with ~~an~~ experiment, the Soviet Side assumes that the unified calculation method should include the following necessary elements:

a) ~~implementation~~ ^{use} of the idea of wing input, i.e. division of the spectral lines into two groups: the group of wing input lines ~~separated~~ ^{fl} from the spectral interval being examined by a sufficient distance and the group of direct input lines, the input into the absorption from which it is ~~calculated~~ ^{is} calculated according to the fine contours of the line;

b) preliminary sorting of the initial spectral information to decrease its volume because of "weak" lines. A comparison of the calculations shows that within 1 % accuracy the absolute transmission can be discounted from the direct input into the absorption of the lines, the intensity of which satisfies the the following equation conditionally:

$$S_i < \epsilon \bar{S}, \quad \bar{S} = \frac{1}{N} \sum_{i=1}^N S_i$$

where \bar{S} is the average intensity of the lines that fall into the direct input; $\epsilon = 0.01-0.03$ is the parameter for selecting the weak lines;

c) splitting of the entire field of integration ~~resulting from the~~ ^{for} pressure ^{into} of three sub-areas, each of which ~~uses~~ ⁱⁿ its own, constant ~~rate~~ ^{step}

of integration with the frequency ^{for} ~~is used~~. The recommended values ~~for~~ ^{step for frequency:} of the integration

$$\Delta \nu = 0.02 \text{ cm}^{-1}$$

for 1000 millibars > p > 150 millibars

$$\Delta \nu = 0.005 \text{ cm}^{-1}$$

150 millibars > p > 15 millibars

$$\Delta \nu = 0.001 \text{ cm}^{-1}$$

15 millibars > p

d) tabulation of the Voigt function, according to which the absorption from the lines entering the direct input is calculated.

Tabulation of the Voigt function, effective in ^{the} cases of a constant ^{step} rate of integration ^{for} the frequency, allows one to replace the direct computation of the Voigt integral or a similar procedure with a much simpler operation for recovering the corresponding value from a ^{two-dimensional} ~~dimensional~~ table.

^{the proposed} method helps to decrease the cost of the calculation significantly;

e) using the Benedict contour of the spectral line to calculate the transmission functions in 4.3 and 15 micron bands of absorption of CO₂

$$K_\nu = \begin{cases} K_{\nu 0} & |\nu - \nu_i| \leq 3.5 \text{ cm}^{-1} \\ K_{\nu 0} \exp[-1.4(|\nu - \nu_i| - 3.5)^{0.25}] & |\nu - \nu_i| > 3.5 \text{ cm}^{-1} \end{cases}$$

where the Lorents contour for pressures of $p \geq 0.1$ atm and the Voigt contour for $p \leq 0.1$ atm are used for the $K_{\nu 0}$.

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Table 2.1

/5.

TRANSMISSION FUNCTIONS
in a 15 micron band of CO₂ for identical conditions

Values for \checkmark cm⁻¹

580	585	590	593	595	598
60I	603	605	6I0	6I4	6I5
6I6	6I7	6I8	6I9	620	62I
622	625	630	634	640	643
645	647	649	650	652	657
660	66I	662	663	664	665
666	667	667,5	668	669	670
67I	672	673	674	675	677,5
680	685	690	700	705	7I0
7I5	7I6	7I7	7I8	7I9	720
722	724	725	727	735	739
740	74I	750	755	760	770

L = 497; P = 0.2006; T = 293.

0.9959	0.9926	0.9876	0.9826	0.9735	0.9635
0.9727	0.9674	0.9656	0.9678	0.956I	0.9I77
0.843I	0.7723	0.7737	0.8465	0.9202	0.9536
0.9575	0.9333	0.8826	0.8365	0.7685	0.7357
0.7I65	0.64I9	0.5I32	0.5460	0.6233	0.6I56
0.64I8	0.6420	0.6295	0.6342	0.6643	0.6633
0.5554	0.337I	0.228I	0.I5I0	0.I337	0.267I
0.4388	0.5558	0.6020	0.6058	0.5964	0.587I
0.5860	0.6402	0.667I	0.820I	0.8646	0.9I2I
0.9420	0.9438	0.9280	0.8697	0.769I	0.700I
0.8568	0.9707	0.9748	0.97I0	0.958I	0.9549
0.9488	0.9440	0.9854	0.99I6	0.9959	0.9990

Continuation of Table 2.1

 $L = 497; P = 0.1976; T = 213.$

0.9995	0.9986	0.9966	0.9940	0.9908	0.9872
0.9860	0.9823	0.9797	0.9806	0.9776	0.9589
0.9158	0.8675	0.8601	0.9020	0.9499	0.9734
0.9775	0.9636	0.9239	0.8782	0.7932	0.7422
0.7098	0.6374	0.4855	0.5085	0.5670	0.5265
0.5464	0.5441	0.5298	0.5344	0.5558	0.5353
0.4203	0.2373	0.1592	0.1140	0.1448	0.2902
0.4320	0.5047	0.5234	0.5184	0.5072	0.5021
0.5173	0.5965	0.6883	0.8766	0.9244	0.9563
0.9719	0.9738	0.9686	0.9398	0.8769	0.8195
0.9031	0.9828	0.9859	0.9835	0.9748	0.9810
0.9813	0.9815	0.9959	0.9987	0.9995	0.9999

 $L = 497; P = 0.1976; T = 253.$

0.9982	0.9962	0.9926	0.9880	0.9824	0.9767
0.9783	0.9749	0.9730	0.9745	0.9675	0.9386
0.8781	0.8160	0.8123	0.8715	0.9346	0.9644
0.9687	0.9494	0.9034	0.8594	0.7811	0.7383
0.7169	0.6489	0.5087	0.5363	0.6046	0.5830
0.6032	0.6009	0.5871	0.5934	0.6229	0.6153
0.5029	0.2965	0.1997	0.1362	0.1425	0.2858
0.4475	0.5451	0.5773	0.5751	0.5635	0.5581
0.5618	0.6263	0.6854	0.8474	0.8971	0.9339
0.9589	0.9610	0.9510	0.9071	0.8220	0.7546
0.8773	0.9777	0.9815	0.9779	0.9668	0.9683
0.9667	0.9654	0.9912	0.9961	0.9983	0.9997

$L = 497; \quad P = 0.2006; \quad T = 313.$

0.9942	0.9899	0.9843	0.9781	0.9670	0.9571
0.9728	0.9669	0.9646	0.9660	0.9513	0.9078
0.8272	0.7541	0.7590	0.8371	0.9139	0.9480
0.9513	0.9249	0.8757	0.8297	0.7658	0.7386
0.7174	0.6362	0.5176	0.5563	0.6381	0.6344
0.6618	0.6642	0.6526	0.6555	0.6840	0.6850
0.5796	0.3567	0.2423	0.1591	0.1310	0.2585
0.4324	0.5574	0.6115	0.6203	0.6138	0.6064
0.6035	0.6524	0.6599	0.8078	0.8568	0.9016
0.9329	0.9338	0.9144	0.8496	0.7448	0.6791
0.8505	0.9678	0.9721	0.9681	0.9565	0.9515
0.9425	0.9344	0.9815	0.9885	0.9942	0.9984

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$L = 1470; \quad P = 0.5015; \quad T = 293.$

0.9715	0.9519	0.9270	0.8989	0.8502	0.7954
0.8524	0.8361	0.8226	0.8285	0.7814	0.6815
0.5343	0.4296	0.4606	0.5961	0.7188	0.7667
0.7576	0.6496	0.4770	0.3581	0.2279	0.1989
0.1772	0.1177	0.0454	0.0495	0.0767	0.0663
0.0768	0.0811	0.0786	0.0701	0.0605	0.0457
0.0252	0.0090	0.0045	0.0021	0.0016	0.0074
0.0231	0.0438	0.0583	0.0632	0.0623	0.0565
0.0592	0.0792	0.1088	0.3040	0.4463	0.5969
0.7121	0.7149	0.6659	0.5366	0.3746	0.3135
0.6388	0.8484	0.8560	0.8347	0.7991	0.7766
0.7453	0.7217	0.9123	0.9447	0.9707	0.9923

Continuation of Table 21.

$$\underline{L = 1470; \quad P = 0.5015; \quad T = 253.}$$

0.9874	0.9743	0.9505	0.9275	0.8932	0.8544
0.8813	0.8662	0.8510	0.8556	0.8300	0.7507
0.6167	0.5061	0.5202	0.6443	0.7651	0.8162
0.8118	0.7138	0.5410	0.4115	0.2412	0.1828
0.1559	0.1031	0.0389	0.0382	0.0539	0.0408
0.0459	0.0488	0.0487	0.0445	0.0369	0.0248
0.0119	0.0037	0.0017	0.0008	0.0012	0.0055
0.0162	0.0292	0.0368	0.0383	0.0371	0.0347
0.0370	0.0593	0.1162	0.3712	0.5355	0.6716
0.7737	0.7838	0.7517	0.6384	0.4725	0.3880
0.6809	0.8812	0.8865	0.8654	0.8288	0.8286
0.8162	0.8072	0.9444	0.9720	0.9872	0.9973

$$\underline{L = 1470; \quad P = 0.5015; \quad T = 213.}$$

0.9962	0.9900	0.9765	0.9600	0.9398	0.9132
0.9110	0.8949	0.8830	0.8858	0.8763	0.8202
0.7100	0.6035	0.5997	0.7029	0.8127	0.8621
0.8607	0.7747	0.6060	0.4728	0.2587	0.1711
0.1303	0.0807	0.0270	0.0238	0.0302	0.0160
0.0188	0.0207	0.0212	0.0200	0.0161	0.0094
0.0037	0.0010	0.0004	0.0002	0.0006	0.0027
0.0071	0.0121	0.0148	0.0152	0.0146	0.0128
0.0156	0.0373	0.1114	0.4580	0.6367	0.7616
0.8397	0.8504	0.8335	0.7487	0.5979	0.4939
0.7264	0.9073	0.9105	0.8915	0.8623	0.8864
0.8856	0.8844	0.9740	0.9903	0.9966	0.9994

Continuation of Table 2.1

$L = 4874;$ $P = 1.003;$ $T = 293.$

0.8426	0.7631	0.6668	0.5924	0.4757	0.3694
0.4616	0.4370	0.4084	0.3890	0.3034	0.2191
0.1292	0.0771	0.0910	0.1585	0.2323	0.2676
0.2560	0.1220	0.0160	0.0038	0.0003	0.0001
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0009	0.0112	0.0602
0.1898	0.1896	0.1565	0.0994	0.0498	0.0420
0.2076	0.4073	0.4364	0.4140	0.3420	0.3024
0.2601	0.2379	0.6261	0.7265	0.8392	0.9499

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$L = 4874;$ $P = 1.003;$ $T = 213.$

0.9759	0.9392	0.8680	0.7993	0.7208	0.6238
0.6288	0.5875	0.5530	0.5356	0.5035	0.4205
0.2977	0.2002	0.1989	0.2902	0.3959	0.4467
0.4340	0.2585	0.0598	0.0164	0.0003	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0106	0.0869	0.2356
0.4120	0.4296	0.4019	0.3085	0.1866	0.1258
0.3445	0.5836	0.6002	0.5535	0.5036	0.5483
0.5381	0.5307	0.8562	0.9406	0.9784	0.9966

Continuation of Table 2.1

$$\underline{L = 4874; \quad P = 1.003; \quad T = 253.}$$

0.9226	0.8554	0.7594	0.6813	0.5824	0.4758
0.5342	0.5058	0.4718	0.4556	0.3985	0.3087
0.1972	0.1219	0.1297	0.2095	0.2994	0.3437
0.3323	0.1749	0.0303	0.0078	0.0003	0.0001
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0027	0.0311	0.1199
0.2812	0.2915	0.2593	0.1806	0.0968	0.0693
0.2670	0.4908	0.5162	0.4829	0.4160	0.4103
0.3761	0.3523	0.7331	0.8436	0.9237	0.9826

$$\underline{L = 4874; \quad P = 1.003; \quad T = 313.}$$

0.7963	0.7132	0.6204	0.5393	0.4183	0.3386
0.4482	0.4226	0.3933	0.3631	0.2680	0.1867
0.1059	0.0629	0.0784	0.1404	0.2072	0.2388
0.2272	0.1039	0.0121	0.0029	0.0003	0.0001
0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0006	0.0086	0.0441
0.1588	0.1541	0.1208	0.0724	0.0352	0.0333
0.1814	0.3649	0.3965	0.3843	0.3252	0.2668
0.2224	0.2016	0.5745	0.6615	0.7925	0.9248

Continuation of Table 2.1

$L = 4874;$ $P = 0.01;$ $T = 293.$

0.9981	0.9972	0.9963	0.9952	0.9921	0.9884
0.9941	0.9931	0.9923	0.9931	0.9876	0.9761
0.9553	0.9360	0.9365	0.9562	0.9762	0.9855
0.9872	0.9829	0.9750	0.9665	0.9555	0.9527
0.9470	0.9147	0.8680	0.8880	0.9302	0.9387
0.9393	0.9320	0.9139	0.9055	0.9175	0.9219
0.8624	0.7024	0.6188	0.5706	0.6192	0.7619
0.8651	0.9116	0.9289	0.9358	0.9398	0.9375
0.9333	0.9427	0.9342	0.9686	0.9740	0.9842
0.9859	0.9854	0.9806	0.9661	0.9414	0.9229
0.9604	0.9916	0.9933	0.9928	0.9914	0.9890
0.9859	0.9832	0.9960	0.9967	0.9982	0.9996

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$L = 1470;$ $P = 0.0502;$ $T = 293.$

0.9973	0.9952	0.9940	0.9906	0.9853	0.9794
0.9876	0.9844	0.9831	0.9862	0.9758	0.9524
0.9086	0.8674	0.8682	0.9103	0.9529	0.9723
0.9752	0.9650	0.9486	0.9306	0.9115	0.9138
0.9072	0.8530	0.7604	0.7977	0.8798	0.8919
0.8914	0.8796	0.8493	0.8345	0.8526	0.8608
0.7929	0.6074	0.5031	0.4313	0.4473	0.6044
0.7527	0.8368	0.8719	0.8842	0.8904	0.8919
0.8876	0.9004	0.8876	0.9364	0.9445	0.9650
0.9710	0.9709	0.9615	0.9302	0.8762	0.8364
0.9178	0.9834	0.9870	0.9857	0.9813	0.9783
0.9737	0.9699	0.9920	0.9946	0.9973	0.9993

Continuation of Table 2.1

$$\underline{L = 4874; \quad P = 0.01; \quad T = 293.}$$

0.9981	0.9972	0.9963	0.9952	0.9921	0.9884
0.9941	0.9931	0.9923	0.9931	0.9876	0.9761
0.9553	0.9360	0.9365	0.9562	0.9762	0.9855
0.9872	0.9829	0.9750	0.9665	0.9555	0.9527
0.9470	0.9147	0.8680	0.8880	0.9302	0.9387
0.9393	0.9320	0.9139	0.9055	0.9175	0.9219
0.8624	0.7024	0.6188	0.5706	0.6192	0.7619
0.8651	0.9116	0.9289	0.9358	0.9398	0.9375
0.9333	0.9427	0.9342	0.9686	0.9740	0.9842
0.9859	0.9854	0.9806	0.9661	0.9414	0.9229
0.9604	0.9916	0.9933	0.9928	0.9914	0.9890
0.9859	0.9832	0.9960	0.9967	0.9982	0.9996

$$\underline{L = 1470; \quad P = 0.05; \quad T = 293.}$$

0.9972	0.9950	0.9935	0.9898	0.9841	0.9777
0.9862	0.9829	0.9814	0.9846	0.9739	0.9490
0.9019	0.8575	0.8582	0.9035	0.9494	0.9704
0.9735	0.9621	0.9418	0.9183	0.8878	0.8809
0.8690	0.8134	0.7193	0.7533	0.8303	0.8402
0.8407	0.8318	0.8069	0.7986	0.8235	0.8376
0.7671	0.5614	0.4407	0.3516	0.3467	0.5160
0.6869	0.7811	0.8175	0.8286	0.8324	0.8285
0.8206	0.8528	0.8447	0.9198	0.9356	0.9602
0.9683	0.9684	0.9584	0.9242	0.8644	0.8205
0.9105	0.9821	0.9859	0.9842	0.9790	0.9762
0.9714	0.9675	0.9914	0.9943	0.9971	0.9993

Continuation of Table 2.1

$L = 4874;$ $P = 0.2;$ $T = 293.$

0.9661	0.9472	0.9318	0.9083	0.8618	0.8184
0.8847	0.8687	0.8563	0.8582	0.7967	0.6982
0.5583	0.4648	0.5029	0.6337	0.7453	0.7875
0.7825	0.7039	0.5629	0.4452	0.3610	0.3550
0.3159	0.2192	0.0957	0.1055	0.1584	0.1613
0.1848	0.1958	0.1838	0.1484	0.1203	0.0976
0.0644	0.0292	0.0166	0.0089	0.0077	0.0265
0.0678	0.1155	0.1453	0.1532	0.1519	0.1715
0.2114	0.2023	0.2106	0.4364	0.5493	0.6732
0.7534	0.7493	0.6967	0.5681	0.4104	0.3528
0.6691	0.8650	0.8742	0.8612	0.8402	0.8083
0.7686	0.7383	0.9184	0.9392	0.9652	0.9903

$L = 4874;$ $P = 0.05;$ $T = 293.$ ORIGINAL PAGE IS
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0.9914	0.9865	0.9844	0.9771	0.9633	0.9504
0.9732	0.9669	0.9634	0.9668	0.9430	0.8975
0.8201	0.7547	0.7638	0.8380	0.9078	0.9379
0.9412	0.9214	0.8845	0.8414	0.8010	0.7952
0.7770	0.6824	0.5400	0.5927	0.7094	0.7286
0.7312	0.7103	0.6550	0.6228	0.6498	0.6739
0.6176	0.4387	0.3280	0.2376	0.1961	0.3312
0.5107	0.6331	0.6891	0.7066	0.7108	0.7156
0.7117	0.7619	0.7357	0.8555	0.8782	0.9184
0.9344	0.9325	0.9117	0.8512	0.7564	0.6962
0.8510	0.9629	0.9691	0.9667	0.9591	0.9489
0.9352	0.9237	0.9796	0.9846	0.9914	0.9977

TRANSMISSION FUNCTIONS
in a 4.3 micron band of CO₂ for identical conditions

Values for $\sqrt{\text{cm}^{-1}}$

2200	2210	2215	2220	2225	2230
2235	2240	2245	2246	2247	2248
2250	2255	2257	2260	2261	2262
2265	2270	2275	2280	2283	2286
2289	2292	2295	2298	2301	2304
2307	2310	2313	2316	2319	2322
2325	2328	2331	2334	2337	2340
2343	2346	2349	2352	2355	3358
2361	2364	2367	2370		

L is the length of the path (cm), P is the pressure (atm), T is the temperature (degrees Kelvin).

$$\underline{L = 497; \quad P = 0.010; \quad T = 213.}$$

1.0000	0.9999	0.9998	0.9993	0.9975	0.9935
0.9865	0.9783	0.9653	0.9629	0.9611	0.9579
0.9481	0.9345	0.9314	0.9231	0.9211	0.9195
0.9171	0.9079	0.8960	0.8845	0.9088	0.8773
0.8664	0.8436	0.8296	0.8230	0.7993	0.7821
0.7592	0.7246	0.7149	0.7060	0.6678	0.6041
0.5782	0.6132	0.5369	0.5616	0.4779	0.4920
0.4889	0.5279	0.5693	0.5659	0.4890	0.5269
0.4886	0.5338	0.5894	0.7067		

$$\underline{L = 497; \quad P = 0.066; \quad T = 213.}$$

0.9999	0.9995	0.9986	0.9955	0.9860	0.9633
0.9278	0.8793	0.8153	0.8131	0.8117	0.7956
0.7371	0.6646	0.6653	0.6471	0.6438	0.6310
0.5934	0.5992	0.5347	0.4985	0.5752	0.4710
0.4487	0.3903	0.3302	0.3354	0.2417	0.2798
0.1637	0.0856	0.0859	0.1015	0.0311	0.0055
0.0047	0.0039	0.0008	0.0005	0.0001	0.0001
0.0001	0.0008	0.0013	0.0011	0.0001	0.0000
0.0000	0.0000	0.0001	0.0018		

$$\underline{L = 1470; \quad P = 0.010; \quad T = 213.}$$

1.0000	0.9998	0.9994	0.9981	0.9938	0.9861
0.9745	0.9608	0.9398	0.9368	0.9353	0.9311
0.9153	0.8948	0.8930	0.8839	0.8819	0.8801
0.8783	0.8656	0.8484	0.8218	0.8493	0.8055
0.8060	0.7761	0.7529	0.7449	0.7080	0.6953
0.6552	0.6039	0.6088	0.5932	0.5316	0.4256
0.3697	0.4109	0.3086	0.3208	0.2354	0.2511
0.2613	0.3240	0.3794	0.3497	0.2414	0.2381
0.2056	0.2416	0.3129	0.4792		

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$$\underline{L = 1470; \quad P = 0.0265; \quad T = 213.}$$

0.9999	0.9994	0.9985	0.9950	0.9857	0.9675
0.9416	0.9080	0.8606	0.8587	0.8597	0.8509
0.8136	0.7690	0.7715	0.7618	0.7569	0.7498
0.7404	0.7281	0.6889	0.6364	0.6824	0.6083
0.6123	0.5526	0.5030	0.4991	0.4394	0.4507
0.3602	0.2627	0.2784	0.2558	0.1454	0.0662
0.0419	0.0419	0.0184	0.0125	0.0044	0.0054
0.0067	0.0215	0.0309	0.0225	0.0037	0.0013
0.0009	0.0015	0.0052	0.0273		

$$\underline{L = 1470; \quad P = 0.066; \quad T = 213.}$$

0.9997	0.9985	0.9960	0.9878	0.9662	0.9229
0.8677	0.7911	0.7083	0.7139	0.7163	0.6914
0.6014	0.5063	0.5103	0.4830	0.4812	0.4610
0.3983	0.4010	0.3239	0.3088	0.3728	0.2843
0.2597	0.2030	0.1527	0.1631	0.0911	0.1249
0.0485	0.0150	0.0119	0.0143	0.0016	0.0001
0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000		

$$\underline{L = 497; \quad P = 0.474; \quad T = 213.}$$

0.9992	0.9966	0.9904	0.9688	0.9056	0.7671
0.5978	0.3226	0.1480	0.1300	0.1091	0.0838
0.0405	0.0050	0.0018	0.0002	0.0001	0.0001
0.0000	0.0000	0.0000	0.0000	0.0005	0.0001
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000		

$$\underline{L = 497; \quad P = 0.184; \quad T = 253.}$$

0.9986	0.9932	0.9827	0.9563	0.9058	0.8137
0.7294	0.5690	0.4632	0.4703	0.4694	0.4433
0.3397	0.1904	0.1886	0.1661	0.1722	0.1615
0.1058	0.1134	0.0738	0.0672	0.0772	0.0526
0.0282	0.0158	0.0044	0.0021	0.0002	0.0012
0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000		

$L = 497;$ $P = 0.066;$ $T = 253.$

0.9995	0.9975	0.9940	0.9843	0.9651	0.9283
0.8902	0.8364	0.7735	0.7752	0.7774	0.7628
0.7038	0.6440	0.6516	0.6495	0.6473	0.6358
0.5950	0.5968	0.5170	0.4434	0.4825	0.3764
0.3651	0.3004	0.2434	0.2481	0.1520	0.1961
0.0890	0.0426	0.0667	0.0836	0.0230	0.0064
0.0075	0.0078	0.0022	0.0015	0.0005	0.0008
0.0008	0.0027	0.0042	0.0045	0.0005	0.0001
0.0001	0.0001	0.0004	0.0029		

$L = 497;$ $P = 0.01;$ $T = 253.$

0.9999	0.9996	0.9991	0.9975	0.9935	0.9869
0.9785	0.9694	0.9562	0.9542	0.9531	0.9508
0.9427	0.9341	0.9324	0.9271	0.9259	0.9251
0.9194	0.9062	0.8931	0.8731	0.8847	0.8500
0.8381	0.8048	0.7873	0.7776	0.7506	0.7441
0.7172	0.6798	0.6872	0.6862	0.6528	0.6008
0.5849	0.6337	0.5636	0.5945	0.5235	0.5501
0.5380	0.5623	0.5860	0.6038	0.5427	0.5849
0.5481	0.5739	0.6174	0.7166		

$L = 1470;$ $P = 0.01;$ $T = 253.$

0.9998	0.9989	0.9976	0.9936	0.9859	0.9742
0.9616	0.9462	0.9250	0.9228	0.9227	0.9198
0.9060	0.8912	0.8908	0.8850	0.8840	0.8833
0.8755	0.8511	0.8306	0.7954	0.8095	0.7588
0.7564	0.7111	0.6846	0.6793	0.6384	0.6439
0.5997	0.5468	0.5766	0.5685	0.5154	0.4288
0.3931	0.4492	0.5506	0.3774	0.2964	0.3301
0.3304	0.3854	0.4259	0.4234	0.3247	0.3390
0.2890	0.3087	0.3638	0.5113		

$$\underline{L = 4874; \quad P = 0.010; \quad T = 253.}$$

/18.

0.9993	0.9965	0.9929	0.9838	0.9706	0.9488
0.9307	0.9055	0.8742	0.8735	0.8765	0.8731
0.8498	0.8243	0.8272	0.8213	0.8213	0.8203
0.8083	0.7750	0.7420	0.6851	0.6931	0.6231
0.6415	0.5853	0.5495	0.5550	0.4983	0.5148
0.4445	0.3708	0.4098	0.3899	0.3100	0.2044
0.1641	0.1992	0.1283	0.1285	0.0769	0.1023
0.1068	0.1624	0.1999	0.1819	0.0927	0.0697
0.0514	0.0553	0.0847	0.1771		

$$\underline{L = 4874; \quad P = 0.0265; \quad T = 253.}$$

0.9983	0.9913	0.9820	0.9616	0.9331	0.8822
0.8488	0.7936	0.7398	0.7502	0.7610	0.7488
0.6886	0.6318	0.6386	0.6311	0.6294	0.6164
0.5788	0.5452	0.4831	0.4017	0.4111	0.3354
0.3613	0.2954	0.2392	0.2444	0.1739	0.1982
0.1128	0.0578	0.0637	0.0560	0.0190	0.0072
0.0036	0.0021	0.0007	0.0004	0.0001	0.0002
0.0002	0.0015	0.0026	0.0020	0.0001	0.0000
0.0000	0.0000	0.0000	0.0005		

$$\underline{L = 497; \quad P = 0.010; \quad T = 310.}$$

0.9997	0.9981	0.9962	0.9916	0.9848	0.9750
0.9675	0.9558	0.9417	0.9405	0.9412	0.9402
0.9322	0.9250	0.9252	0.9204	0.9192	0.9173
0.9039	0.8814	0.8607	0.8284	0.8278	0.7893
0.7868	0.7386	0.7202	0.7117	0.6731	0.6786
0.6492	0.6141	0.6467	0.6521	0.6239	0.5827
0.5823	0.6425	0.5713	0.6012	0.5289	0.5769
0.5528	0.5659	0.5756	0.6204	0.5779	0.6218
0.5874	0.6081	0.6493	0.7365		

$$\underline{L = 497; \quad P = 0.066; \quad T = 310.}$$

0.9979	0.9884	0.9760	0.9540	0.9235	0.8740
0.8424	0.7815	0.7325	0.7390	0.7476	0.7382
0.6838	0.6213	0.6366	0.6387	0.6373	0.6222
0.5675	0.5378	0.4397	0.3403	0.3270	0.2497
0.2723	0.2116	0.1570	0.1571	0.0809	0.1220
0.0436	0.0223	0.0586	0.0747	0.0191	0.0091
0.0143	0.0171	0.0065	0.0049	0.0018	0.0039
0.0038	0.0075	0.0097	0.0137	0.0032	0.0014
0.0009	0.0008	0.0015	0.0066		

$$\underline{L = 497; \quad P = 0.472; \quad T = 310.}$$

0.9847	0.9221	0.8342	0.7029	0.5482	0.3551
0.2962	0.1041	0.0435	0.0418	0.0388	0.0338
0.0204	0.0032	0.0018	0.0007	0.0005	0.0004
0.0003	0.0001	0.0001	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000	0.0000		

TRANSMISSION FUNCTIONS

(Standard Atmosphere in the USA, 1962)

15 micron band of CO₂ a concentration of 330 parts per million

Channel No. 1

0.00000	0.00000	0.07326	0.44568	0.69945
0.00000	0.00000	0.10730	0.47888	0.73931
0.00000	0.00004	0.15427	0.51493	0.79261
0.00000	0.00021	0.21774	0.55704	0.86949
0.00000	0.00095	0.25799	0.58577	0.89600
0.00000	0.00382	0.30494	0.61770	0.92122
0.00000	0.01373	0.35772	0.64229	0.95057
0.00000	0.03961	0.41494	0.66861	0.95589

Channel No. 2

0.00000	0.00016	0.40464	0.80954	0.92384
0.00000	0.00133	0.47329	0.83045	0.93558
0.00000	0.00883	0.54724	0.85050	0.95023
0.00000	0.02081	0.62350	0.87121	0.96945
0.00000	0.04575	0.66439	0.88368	0.97582
0.00000	0.09528	0.70700	0.89619	0.98143
0.00000	0.19609	0.74932	0.90491	0.98790
0.00002	0.31551	0.78908	0.91369	0.98987

Channel No. 3

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0.00002	0.11328	0.72618	0.92132	0.97065
0.00007	0.17178	0.76401	0.93043	0.97532
0.00019	0.25539	0.80154	0.93907	0.98123
0.00140	0.31125	0.83847	0.94801	0.98875
0.00483	0.38064	0.85744	0.95351	0.99128
0.01547	0.46795	0.87652	0.95870	0.99347
0.04408	0.58202	0.89411	0.96262	0.99480
0.07177	0.67030	0.91217	0.96667	0.99562

Channel № 4.

0.00977	0.42150	0.85512	0.95748	0.98547
0.01571	0.50207	0.87435	0.96245	0.98786
0.02372	0.58773	0.89367	0.96741	0.99060
0.05681	0.63285	0.91318	0.97243	0.99383
0.10034	0.68100	0.92317	0.97562	0.99514
0.17171	0.73250	0.93308	0.97872	0.99611
0.27772	0.78829	0.94259	0.98087	0.99697
0.34490	0.82628	0.95238	0.98317	0.99750

Channel № 5.

0.13529	0.65192	0.88542	0.95917	0.98590
0.17057	0.69919	0.89736	0.96386	0.98822
0.20649	0.74510	0.90999	0.96852	0.99076
0.29972	0.76850	0.92344	0.97346	0.99391
0.37602	0.79323	0.93079	0.97638	0.99505
0.46215	0.81905	0.93862	0.97948	0.99606
0.55448	0.84748	0.94637	0.98157	0.99693
0.60319	0.86834	0.95473	0.98367	0.99751

Channel № 6.

0.33932	0.82742	0.95716	0.98612	0.99482
0.38561	0.85655	0.96246	0.98758	0.99554
0.42913	0.88400	0.96778	0.98915	0.99640
0.53205	0.89696	0.97327	0.99065	0.99763
0.60606	0.91034	0.97607	0.99158	0.99815
0.68220	0.92381	0.97896	0.99256	0.99856
0.75746	0.93851	0.98171	0.99325	0.99907
0.79388	0.94917	0.98461	0.99400	0.99931

TRANSMISSION FUNCTIONS
(Arctic Atmosphere)

/22.

15 micron band of CO₂ a concentration of 330 parts per million

Channel № 1.

0.00000	0.00000	0.07289	0.45333	0.71453
0.00000	0.00000	0.10721	0.48761	0.75246
0.00000	0.00004	0.15441	0.52458	0.80198
0.00000	0.00021	0.21842	0.56812	0.87222
0.00000	0.00095	0.25924	0.59798	0.89588
0.00000	0.00380	0.30725	0.63149	0.91919
0.00000	0.01365	0.36171	0.65590	0.94599
0.00000	0.03937	0.42149	0.68320	0.95455

Channel № 2.

0.00000	0.00015	0.40577	0.81393	0.92842
0.00000	0.00130	0.47484	0.83474	0.93973
0.00000	0.00877	0.54923	0.85545	0.95301
0.00000	0.02065	0.62637	0.87611	0.97017
0.00000	0.04539	0.66766	0.88867	0.97579
0.00000	0.09464	0.71013	0.90119	0.98110
0.00000	0.19565	0.75317	0.90954	0.98733
0.00002	0.31586	0.79333	0.91870	0.98959

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Channel № 3.

0.00007	0.11747	0.73441	0.92741	0.97373
0.00018	0.17296	0.77257	0.93609	0.97817
0.00043	0.25600	0.81035	0.94428	0.98304
0.00240	0.31237	0.84705	0.95287	0.98926
0.00726	0.38254	0.86571	0.95800	0.99133
0.02039	0.47097	0.88449	0.96295	0.99324
0.05177	0.58691	0.90182	0.96643	0.99449
0.07911	0.67696	0.91877	0.96983	0.99535

Channel № 4.

0.01658	0.43148	0.86205	0.96236	0.98717
0.02441	0.50417	0.88179	0.96694	0.98923
0.03477	0.58779	0.90132	0.97140	0.99153
0.07532	0.63376	0.92064	0.97605	0.99426
0.12553	0.68296	0.93038	0.97887	0.99516
0.20154	0.73585	0.93993	0.98160	0.99596
0.30499	0.79338	0.94891	0.98351	0.99677
0.36625	0.83242	0.95780	0.98534	0.99732

Channel № 5.

0.17080	0.65901	0.89055	0.96357	0.98787
0.20495	0.70137	0.90285	0.96788	0.98976
0.24009	0.74663	0.91586	0.97217	0.99187
0.33305	0.77043	0.92944	0.97669	0.99419
0.40748	0.79567	0.93670	0.97939	0.99508
0.48974	0.82210	0.94428	0.98224	0.99594
0.57450	0.85143	0.95175	0.98403	0.99676
0.61750	0.87300	0.95946	0.98588	0.99736

Channel № 6.

0.40516	0.83481	0.96090	0.98860	0.99576
0.44439	0.85961	0.96639	0.98987	0.99631
0.48326	0.88593	0.97190	0.99122	0.99696
0.57624	0.89911	0.97719	0.99254	0.99781
0.64455	0.91274	0.97984	0.99331	0.99814
0.71361	0.92651	0.98253	0.99409	0.99845
0.77863	0.94159	0.98490	0.99464	0.99890
0.80836	0.95261	0.98731	0.99518	0.99921

TRANSMISSION FUNCTIONS
(Tropic Atmosphere)

/24.

15 micron band of CO₂ a concentration of 330 parts per million

Channel № 1.

0.00000	0.00000	0.07184	0.44348	0.69721
0.00000	0.00000	0.10637	0.47568	0.73830
0.00000	0.00004	0.15396	0.51099	0.79277
0.00000	0.00020	0.21733	0.55271	0.87044
0.00000	0.00086	0.25728	0.58198	0.89691
0.00000	0.00344	0.30426	0.61410	0.92216
0.00000	0.01284	0.35672	0.63935	0.94971
0.00000	0.03801	0.41335	0.66604	0.95509

Channel № 2.

0.00000	0.00017	0.40210	0.80766	0.92318
0.00000	0.00126	0.47165	0.82830	0.93512
0.00000	0.00784	0.54635	0.84832	0.95001
0.00000	0.01833	0.62270	0.86920	0.96937
0.00000	0.04052	0.66348	0.88204	0.97564
0.00000	0.08679	0.70575	0.89474	0.98118
0.00000	0.18713	0.74770	0.90375	0.98748
0.00002	0.31088	0.78728	0.91280	0.98971

Channel № 3.

0.00001	0.11170	0.73433	0.91911	0.97049
0.00003	0.17853	0.76874	0.92804	0.97508
0.00009	0.27571	0.80295	0.93701	0.98116
0.00083	0.33951	0.83782	0.94604	0.98870
0.00326	0.41503	0.85605	0.95195	0.99117
0.01193	0.50354	0.87471	0.95759	0.99331
0.03874	0.60746	0.89204	0.96170	0.99462
0.06693	0.68437	0.90937	0.96612	0.99547

Channel # 4.

0.00665	0.41678	0.86273	0.95530	0.98517
0.01082	0.51326	0.87873	0.96040	0.98775
0.01682	0.61563	0.89520	0.96553	0.99054
0.04321	0.66785	0.91277	0.97093	0.99379
0.08107	0.71898	0.92203	0.97438	0.99507
0.14701	0.76724	0.93141	0.97777	0.99601
0.25515	0.81165	0.94058	0.98011	0.99686
0.32959	0.83991	0.95023	0.98270	0.99740

Channel # 5.

0.11213	0.65092	0.89020	0.95744	0.98562
0.14390	0.70676	0.90005	0.96217	0.98807
0.17792	0.76153	0.91080	0.96699	0.99071
0.27003	0.78802	0.92306	0.97219	0.99390
0.34871	0.81405	0.92999	0.97543	0.99502
0.43895	0.83811	0.93736	0.97870	0.99598
0.53955	0.86108	0.94479	0.98097	0.99684
0.59455	0.87677	0.95295	0.98328	0.99742

Channel # 6.

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0.29487	0.82530	0.95982	0.98504	0.99472
0.33923	0.86302	0.96383	0.98654	0.99552
0.38376	0.89685	0.96808	0.98821	0.99641
0.49061	0.91189	0.97276	0.98990	0.99761
0.57076	0.92575	0.97531	0.99099	0.99811
0.65423	0.93728	0.97800	0.99213	0.99850
0.74033	0.94744	0.98061	0.99290	0.99899
0.78381	0.95442	0.98348	0.99377	0.99925

TRANSMISSION FUNCTIONS
(Standard USA Atmosphere, 1962)

/26.

4.3 micron band of CO₂ a concentration of 330 parts per million

Channel # 1.

0.13560	0.60473	0.89616	0.96564	0.98621
0.16207	0.66001	0.90906	0.96926	0.98793
0.18965	0.71739	0.92234	0.97275	0.99019
0.26418	0.74771	0.93522	0.97652	0.99348
0.32912	0.77995	0.94198	0.97875	0.99480
0.40790	0.81408	0.94852	0.98114	0.99585
0.49998	0.85180	0.95532	0.98268	0.99707
0.55103	0.87713	0.96224	0.98435	0.99779

Channel # 2.

0.00608	0.14914	0.71930	0.90356	0.96314
0.00737	0.21053	0.75266	0.91346	0.96776
0.00890	0.29753	0.78728	0.92403	0.97382
0.01460	0.35365	0.82115	0.93491	0.98275
0.02269	0.42063	0.83899	0.94121	0.98584
0.03948	0.50126	0.85686	0.94826	0.98837
0.07491	0.59930	0.87525	0.95269	0.99115
0.10547	0.67087	0.89368	0.95754	0.99286

Channel # 3.

0.00080	0.00268	0.05353	0.63163	0.86473
0.00089	0.00301	0.09029	0.67938	0.87970
0.00099	0.00346	0.15459	0.72510	0.90204
0.00123	0.00379	0.25401	0.76912	0.96392
0.00146	0.00433	0.32204	0.79307	0.96688
0.00175	0.00547	0.40104	0.81708	0.97017
0.00214	0.00961	0.49050	0.83151	0.97399
0.00239	0.02713	0.58346	0.84631	0.97734

TRANSMISSION FUNCTIONS
(Arctic Atmosphere)

/27.

4.3 micron band of CO₂ a concentration of 330 parts per million

Channel № 1.

0.16827	0.61087	0.90069	0.96882	0.98746
0.19314	0.66206	0.91365	0.97211	0.98894
0.21965	0.71899	0.92698	0.97540	0.99084
0.29284	0.74965	0.93970	0.97900	0.99366
0.35653	0.78236	0.94630	0.98100	0.99472
0.43199	0.81693	0.95270	0.98322	0.99563
0.51777	0.85536	0.95925	0.98453	0.99681
0.56368	0.88125	0.96563	0.98589	0.99756

Channel № 2.

0.00740	0.15020	0.72588	0.90972	0.96674
0.00870	0.21131	0.75973	0.91906	0.97082
0.01029	0.29836	0.79478	0.92929	0.97598
0.01634	0.35489	0.82902	0.93957	0.98363
0.02488	0.42254	0.84661	0.94591	0.98585
0.04204	0.50419	0.86452	0.95257	0.98786
0.07740	0.60392	0.88220	0.95736	0.99050
0.10741	0.67656	0.90016	0.96166	0.99216

Channel № 3.

0.00101	0.00274	0.05269	0.63220	0.87066
0.00109	0.00303	0.08836	0.68130	0.88481
0.00118	0.00345	0.15067	0.72935	0.90489
0.00142	0.00379	0.24832	0.77437	0.96527
0.00165	0.00433	0.31591	0.79920	0.96744
0.00194	0.00547	0.39542	0.82366	0.96949
0.00231	0.00966	0.48660	0.83918	0.97269
0.00252	0.02699	0.58209	0.85344	0.97521

TRANSMISSION FUNCTIONS
(Tropical Atmosphere)

/28.

4.3 micron band of CO₂

a concentration of 330 parts per million

Channel № 1.

0.11483	0.60431	0.89983	0.96436	0.98592
0.13897	0.66711	0.91108	0.96804	0.98777
0.16539	0.73238	0.92279	0.97161	0.99009
0.23879	0.76535	0.93467	0.97554	0.99336
0.30491	0.79847	0.94110	0.97796	0.99465
0.38669	0.83085	0.94748	0.98046	0.99568
0.48617	0.86277	0.95411	0.98208	0.99689
0.54334	0.88387	0.96099	0.98393	0.99762

Channel № 2.

0.00521	0.14808	0.72137	0.90106	0.96240
0.00637	0.21137	0.75339	0.91112	0.96737
0.00779	0.30001	0.78651	0.92162	0.97365
0.01311	0.35736	0.81960	0.93291	0.98256
0.02076	0.42498	0.83686	0.93960	0.98553
0.03686	0.50589	0.85460	0.94693	0.98797
0.07212	0.60330	0.87272	0.95139	0.99071
0.10326	0.67464	0.89111	0.95654	0.99232

Channel № 3.

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0.00068	0.00261	0.05218	0.63134	0.86350
0.00076	0.00304	0.08860	0.67858	0.87914
0.00084	0.00366	0.15318	0.72312	0.90188
0.00107	0.00413	0.25387	0.76619	0.96371
0.00129	0.00487	0.32240	0.79040	0.96645
0.00157	0.00630	0.40190	0.81487	0.96923
0.00198	0.01047	0.49155	0.82922	0.97294
0.00226	0.02667	0.58397	0.84466	0.97547

TRANSMISSION FUNCTIONS

(Standard (Standard USA Atmosphere, 1962)

15 micron band of CO₂ a concentration of 363 parts per millionChannel No 1.

0.00000	0.00000	0.06486	0.43665	0.69247
0.00000	0.00000	0.09721	0.47046	0.73226
0.00000	0.00002	0.14278	0.50716	0.78600
0.00000	0.00013	0.20541	0.54970	0.86480
0.00000	0.00063	0.24567	0.57868	0.89223
0.00000	0.00280	0.29308	0.61074	0.91855
0.00000	0.01104	0.34678	0.63542	0.94932
0.00000	0.03372	0.40524	0.66175	0.95477

Channel No 2.

0.00000	0.00009	0.38760	0.80392	0.92148
0.00000	0.00081	0.45749	0.82554	0.93341
0.00000	0.00630	0.53333	0.84627	0.94837
0.00000	0.01596	0.61165	0.86760	0.96821
0.00000	0.03743	0.65380	0.88046	0.97483
0.00000	0.08250	0.69781	0.89330	0.98071
0.00000	0.17874	0.74164	0.90222	0.98773
0.00001	0.29786	0.78277	0.91117	0.98956

Channel No 3.

0.00001	0.10103	0.71600	0.91848	0.96946
0.00004	0.15651	0.75524	0.92792	0.97428
0.00012	0.23747	0.79423	0.93688	0.98042
0.00099	0.29236	0.83254	0.94612	0.98828
0.00365	0.36136	0.85219	0.95179	0.99093
0.01241	0.44938	0.87201	0.95715	0.99324
0.03739	0.56621	0.89026	0.96118	0.99460
0.06247	0.65813	0.90899	0.96536	0.99545

Channel № 4.

0.00779	0.40148	0.84873	0.95553	0.98479
0.01278	0.48313	0.86880	0.96073	0.98730
0.01960	0.57076	0.88896	0.96591	0.99018
0.04867	0.61727	0.90931	0.97115	0.99357
0.08835	0.66714	0.91974	0.97448	0.99495
0.15554	0.72075	0.93007	0.97772	0.99596
0.25839	0.77901	0.94000	0.97997	0.99684
0.32481	0.81868	0.95021	0.98238	0.99739

Channel № 5.

0.11960	0.63839	0.88098	0.95732	0.98524
0.15321	0.68733	0.89335	0.96220	0.98768
0.18789	0.73506	0.90642	0.96705	0.99037
0.27965	0.75941	0.92032	0.97220	0.99367
0.35611	0.78515	0.92792	0.97526	0.99486
0.44347	0.81207	0.93602	0.97850	0.99591
0.53791	0.84167	0.94405	0.98062	0.99679
0.58804	0.86328	0.95272	0.98290	0.99738

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Channel № 6.

0.31926	0.81857	0.95482	0.98535	0.99453
0.36538	0.84910	0.96041	0.98688	0.99530
0.40900	0.87791	0.96601	0.98853	0.99621
0.51333	0.89154	0.97180	0.99012	0.99752
0.58906	0.90561	0.97475	0.99110	0.99807
0.66750	0.91981	0.97779	0.99214	0.99849
0.74556	0.93526	0.98070	0.99287	0.99901
0.78347	0.94642	0.98376	0.99366	0.99926

TRANSMISSION FUNCTIONS

/31.

(Standard USA Atmosphere, 1962)

4.3 micron band of CO₂

a concentration of 363 parts per million

Channel № 1.

0.12428	0.58905	0.89128	0.96396	0.98556
0.14941	0.64574	0.90476	0.96776	0.98736
0.17579	0.70496	0.91863	0.97141	0.98972
0.24790	0.73636	0.93211	0.97537	0.99314
0.31166	0.76989	0.93918	0.97771	0.99451
0.38988	0.80546	0.94602	0.98023	0.99562
0.48248	0.84489	0.95314	0.98185	0.99690
0.53422	0.87140	0.96040	0.98360	0.99765

Channel № 2.

0.00555	0.13458	0.70896	0.89947	0.96151
0.00671	0.19333	0.74342	0.90975	0.96633
0.00806	0.27841	0.77920	0.92071	0.97267
0.01300	0.33419	0.81422	0.93203	0.98202
0.01990	0.40156	0.83267	0.93859	0.98521
0.03433	0.48361	0.85114	0.94595	0.98786
0.06577	0.58461	0.87016	0.95058	0.99076
0.09371	0.65898	0.88923	0.95564	0.99255

Channel № 3.

0.00077	0.00261	0.04649	0.61685	0.86116
0.00086	0.00294	0.07918	0.66685	0.87641
0.00095	0.00336	0.13845	0.71496	0.89910
0.00120	0.00368	0.23373	0.76134	0.96331
0.00142	0.00418	0.30065	0.78663	0.96628
0.00171	0.00521	0.37971	0.81186	0.96961
0.00209	0.00889	0.47066	0.82699	0.97343
0.00233	0.02382	0.56668	0.84235	0.97681

Table 2.5

/32.

TRANSMISSION FUNCTIONS

(Standard USA Atmosphere, 1962)

15 micron band of CO₂ a concentration of 330 parts per million
taking into account water vapor

Channel No 1.

0.0000	0.0000	0.0730	0.4454	0.6994
0.0000	0.0000	0.1071	0.4786	0.7393
0.0000	0.0000	0.1540	0.5147	0.7926
0.0000	0.0002	0.2174	0.5569	0.8694
0.0000	0.0009	0.2577	0.5857	0.8960
0.0000	0.0038	0.3046	0.6177	0.9212
0.0000	0.0137	0.3574	0.6422	0.9505
0.0000	0.0395	0.4146	0.6686	0.9558

Channel No 2.

0.0000	0.0001	0.4040	0.8095	0.9238
0.0000	0.0013	0.4727	0.8304	0.9355
0.0000	0.0088	0.5467	0.8505	0.9502
0.0000	0.0207	0.6230	0.8712	0.9694
0.0000	0.0456	0.6640	0.8836	0.9758
0.0000	0.0950	0.7067	0.8961	0.9814
0.0000	0.1957	0.7491	0.9049	0.9879
0.0000	0.3150	0.7890	0.9136	0.9898

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Channel No 3.

0.0000	0.1124	0.7250	0.9213	0.9706
0.0000	0.1711	0.7630	0.9304	0.9753
0.0001	0.2546	0.8006	0.9390	0.9812
0.0010	0.3103	0.8377	0.9480	0.9887
0.0045	0.3796	0.8569	0.9535	0.9912
0.0148	0.4668	0.8761	0.9587	0.9934
0.0425	0.5806	0.9838	0.9626	0.9948
0.0705	0.6690	0.9119	0.9666	0.9956

Channel № 4.

0.0049	0.4188	0.8529	0.9574	0.9854
0.0094	0.4991	0.8725	0.9624	0.9878
0.0161	0.5845	0.8922	0.9674	0.9906
0.0473	0.6294	0.9117	0.9724	0.9938
0.0952	0.6779	0.9222	0.9756	0.9951
0.1660	0.7295	0.9324	0.9787	0.9961
0.2705	0.7855	0.9421	0.9808	0.9969
0.3424	0.8202	0.9520	0.9831	0.9975

Channel № 5.

0.0994	0.6499	0.8854	0.9591	0.9859
0.1359	0.6973	0.8973	0.9638	0.9882
0.1748	0.7435	0.9099	0.9685	0.9907
0.2786	0.7671	0.9234	0.9734	0.9939
0.3671	0.7920	0.9307	0.9763	0.9950
0.4563	0.8179	0.9386	0.9794	0.9960
0.5509	0.8465	0.9463	0.9815	0.9969
0.6004	0.8675	0.9547	0.9836	0.9975

Channel № 6.

0.2127	0.8232	0.9562	0.9861	0.9948
0.2722	0.8529	0.9616	0.9875	0.9955
0.3438	0.8809	0.9677	0.9891	0.9964
0.4745	0.8943	0.9733	0.9906	0.9976
0.5839	0.9083	0.9760	0.9915	0.9981
0.6699	0.9221	0.9789	0.9925	0.9985
0.7481	0.9371	0.9817	0.9932	0.9990
0.7890	0.9480	0.9846	0.9940	0.9993

TRANSMISSION FUNCTIONS
(Arctic Atmosphere)

/34.

15 micron band of CO₂ a concentration of 330 parts per million
taking into account water vapor

Channel № 1.

0.0000	0.0000	0.0729	0.4533	0.7145
0.0000	0.0000	0.1072	0.4876	0.7525
0.0000	0.0000	0.1544	0.5246	0.8020
0.0000	0.0002	0.2184	0.5681	0.8722
0.0000	0.0009	0.2592	0.5980	0.8959
0.0000	0.0038	0.3072	0.6315	0.9192
0.0000	0.0136	0.3617	0.6560	0.9460
0.0000	0.0394	0.4215	0.6832	0.9546

Channel № 2.

0.0000	0.0001	0.4058	0.8139	0.9284
0.0000	0.0013	0.4748	0.8347	0.9397
0.0000	0.0088	0.5492	0.8554	0.9530
0.0000	0.0206	0.6264	0.8761	0.9702
0.0000	0.0454	0.6677	0.8887	0.9758
0.0000	0.0946	0.7101	0.9012	0.9811
0.0000	0.1956	0.7532	0.9095	0.9873
0.0000	0.3159	0.7933	0.9187	0.9896

Channel № 3.

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0.0000	0.1170	0.7344	0.9274	0.9737
0.0001	0.1725	0.7726	0.9361	0.9782
0.0003	0.2557	0.8103	0.9443	0.9830
0.0016	0.3123	0.8470	0.9529	0.9892
0.0048	0.3825	0.8657	0.9580	0.9913
0.0170	0.4710	0.8845	0.9629	0.9932
0.0216	0.5869	0.9018	0.9664	0.9944
0.0786	0.6770	0.9188	0.9698	0.9953

Channel № 4.

0.0123	0.4295	0.8618	0.9624	0.9872
0.0197	0.5021	0.8816	0.9669	0.9892
0.0293	0.5842	0.9012	0.9714	0.9915
0.0698	0.6323	0.9204	0.9761	0.9943
0.1184	0.6819	0.9303	0.9789	0.9951
0.2998	0.7333	0.9399	0.9816	0.9960
0.3021	0.7923	0.9489	0.9835	0.9968
0.3632	0.8321	0.9577	0.9853	0.9973

Channel № 5.

0.1458	0.6564	0.8905	0.9635	0.9878
0.1808	0.6998	0.9028	0.9678	0.9897
0.2142	0.7460	0.9158	0.9721	0.9918
0.3024	0.7696	0.9294	0.9766	0.9941
0.3726	0.7950	0.9367	0.9793	0.9950
0.4695	0.8220	0.9442	0.9822	0.9959
0.5712	0.8514	0.9517	0.9840	0.9967
0.6144	0.8730	0.9594	0.9858	0.9973

Channel № 6.

0.3235	0.8335	0.9609	0.9886	0.9957
0.3607	0.8588	0.9663	0.9898	0.9963
0.3979	0.8854	0.9719	0.9912	0.9969
0.4852	0.8990	0.9771	0.9925	0.9978
0.5486	0.9126	0.9798	0.9933	0.9981
0.6636	0.9265	0.9825	0.9940	0.9984
0.7755	0.9415	0.9849	0.9946	0.9989
0.8062	0.9526	0.9873	0.9951	0.9992

TRANSMISSION FUNCTIONS
(Tropical Atmosphere)

/36.

15 micron band of CO₂ a concentration of 330 parts per million
taking into account water vapor

Channel No 1.

0.0000	0.0000	0.0715	0.4434	0.6972
0.0000	0.0000	0.1060	0.4756	0.7383
0.0000	0.0000	0.1535	0.5109	0.7927
0.0000	0.0002	0.2167	0.5527	0.8704
0.0000	0.0008	0.2566	0.5819	0.8969
0.0000	0.0034	0.3036	0.6141	0.9224
0.0000	0.0127	0.3560	0.6393	0.9497
0.0000	0.0378	0.4127	0.6660	0.9550

Channel No 2.

0.0000	0.0001	0.4021	0.8077	0.9232
0.0000	0.0012	0.4716	0.8283	0.9351
0.0000	0.0078	0.5463	0.8483	0.9500
0.0000	0.0182	0.6227	0.8692	0.9694
0.0000	0.0404	0.6635	0.8820	0.9756
0.0000	0.0865	0.7057	0.8947	0.9812
0.0000	0.1868	0.7477	0.9037	0.9875
0.0000	0.3104	0.7873	0.9128	0.9897

Channel No 3.

0.0000	0.1094	0.7294	0.9191	0.9705
0.0000	0.1755	0.7641	0.9280	0.9751
0.0000	0.2714	0.7986	0.9370	0.9812
0.0005	0.3349	0.8337	0.9460	0.9887
0.0026	0.4100	0.8523	0.9520	0.9912
0.0106	0.4980	0.8713	0.9576	0.9933
0.0377	0.6014	0.8894	0.9617	0.9946
0.0653	0.6792	0.9085	0.9661	0.9955

ORIGINAL PAGE IS
OF POOR QUALITY

Channel № 4.

0.0019	0.4106	0.8627	0.9553	0.9852
0.0044	0.5071	0.9767	0.9604	0.9877
0.0096	0.6090	0.8952	0.9655	0.9905
0.0322	0.6609	0.9128	0.9709	0.9938
0.0699	0.7134	0.9220	0.9744	0.9951
0.1350	0.7653	0.9314	0.9778	0.9960
0.2464	0.8116	0.9406	0.9801	0.9969
0.3237	0.8399	0.9582	0.9827	0.9974

Channel № 5.

0.0612	0.6496	0.8902	0.9574	0.9856
0.0945	0.7060	0.9001	0.9622	0.9881
0.1392	0.7609	0.9108	0.9670	0.9907
0.2390	0.7876	0.9231	0.9722	0.9939
0.3275	0.8139	0.9300	0.9754	0.9950
0.4266	0.8381	0.9374	0.9787	0.9960
0.5361	0.8611	0.9448	0.9810	0.9968
0.5925	0.8768	0.9530	0.9833	0.9974

Channel № 6.

0.1153	0.8186	0.9598	0.9850	0.9947
0.1778	0.8581	0.9638	0.9865	0.9955
0.2429	0.8924	0.9681	0.9832	0.9964
0.4015	0.9085	0.9728	0.9899	0.9976
0.5127	0.9230	0.9753	0.9910	0.9981
0.6214	0.9352	0.9780	0.9921	0.9985
0.7265	0.9460	0.9806	0.9929	0.9990
0.7743	0.9534	0.9834	0.9938	0.9992

(Standard USA Atmosphere, 1962)

4.3 micron band of CO₂ a concentration of 330 parts per million
taking into account water vapor

Channel № 1.

0.13132	0.60473	0.89616	0.96564	0.98621
0.15842	0.66001	0.90906	0.96926	0.98793
0.18671	0.71739	0.92234	0.97275	0.99019
0.26251	0.74771	0.93522	0.97652	0.99348
0.32813	0.77995	0.94198	0.97875	0.99480
0.40745	0.81408	0.94852	0.98114	0.99585
0.49983	0.85180	0.95532	0.98268	0.99707
0.55097	0.87713	0.96224	0.98435	0.99779

Channel № 2.

0.00591	0.14914	0.71930	0.90356	0.96314
0.00722	0.21053	0.75266	0.91346	0.96776
0.00878	0.29753	0.78728	0.92403	0.97382
0.01451	0.35365	0.82115	0.93491	0.98275
0.02263	0.42063	0.83899	0.94121	0.98584
0.03944	0.50126	0.85686	0.94826	0.98837
0.07488	0.59930	0.87525	0.95269	0.99115
0.10545	0.67087	0.89368	0.95754	0.99286

ORIGINAL PAGE IS
OF POOR QUALITY

Channel № 3.

0.00078	0.00268	0.05353	0.63163	0.86473
0.00087	0.00301	0.09029	0.67938	0.87970
0.00097	0.00346	0.15459	0.72510	0.90204
0.00122	0.00379	0.25401	0.76912	0.96392
0.00145	0.00433	0.32204	0.79307	0.96688
0.00174	0.00547	0.40104	0.81708	0.97017
0.00213	0.00961	0.49050	0.83151	0.97399
0.00238	0.02713	0.58346	0.84631	0.97734

TRANSMISSION FUNCTIONS
(Tropical Atmosphere)

/39.

4.3 micron band of CO₂ a concentration of 330 parts per million
taking into account water vapor

Channel № 1.

0.10508	0.60425	0.89983	0.96436	0.98592
0.13124	0.66711	0.91108	0.96804	0.98777
0.15948	0.73238	0.92279	0.97161	0.99009
0.23597	0.76535	0.93467	0.97554	0.99336
0.30341	0.79847	0.94110	0.97796	0.99465
0.38603	0.83085	0.94748	0.98046	0.99568
0.48593	0.86277	0.95411	0.98208	0.99689
0.54323	0.88387	0.96099	0.98393	0.99762

Channel № 2.

0.00482	0.14808	0.72137	0.90106	0.96240
0.00606	0.21137	0.75339	0.91112	0.96737
0.00755	0.30001	0.78651	0.92162	0.97365
0.01297	0.35736	0.81960	0.93291	0.98256
0.02067	0.42498	0.83686	0.93960	0.98553
0.03680	0.50589	0.85460	0.94693	0.98797
0.07209	0.60330	0.87272	0.95139	0.99071
0.10324	0.67464	0.89111	0.95654	0.99232

Channel № 3.

0.00064	0.00261	0.05218	0.63134	0.86350
0.00073	0.00304	0.08860	0.67858	0.87914
0.00082	0.00366	0.15318	0.72312	0.90188
0.00106	0.00413	0.25387	0.76619	0.96371
0.00128	0.00487	0.32240	0.79040	0.96645
0.00156	0.00630	0.40190	0.81487	0.96923
0.00198	0.01047	0.49155	0.82922	0.97294
0.00226	0.02667	0.58397	0.84466	0.97547

ORIGINAL PAGE IS
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TRANSMISSION FUNCTIONS
(Standard USA Atmosphere 1962)
OZONE

Channel No. 1.

0.9554	0.9584	0.9684	0.9869	0.9969
0.9557	0.9590	0.9704	0.9885	0.9979
0.9560	0.9599	0.9729	0.9902	0.9988
0.9565	0.9607	0.9760	0.9919	0.9996
0.9569	0.9617	0.9780	0.9931	0.9998
0.9573	0.9630	0.9801	0.9943	0.9999
0.9578	0.9647	0.9826	0.9951	0.9999
0.9581	0.9663	0.9854	0.9960	0.9999

Channel No. 2.

0.9435	0.9472	0.9600	0.9836	0.9963
0.9438	0.9479	0.9625	0.9856	0.9975
0.9442	0.9491	0.9657	0.9878	0.9986
0.9448	0.9501	0.9697	0.9900	0.9996
0.9453	0.9514	0.9722	0.9914	0.9998
0.9458	0.9531	0.9750	0.9929	0.9999
0.9463	0.9553	0.9781	0.9940	0.9999
0.9467	0.9573	0.9816	0.9951	0.9999

Channel No. 3.

0.9556	0.9584	0.9689	0.9876	0.9974
0.9559	0.9590	0.9709	0.9892	0.9982
0.9561	0.9600	0.9735	0.9908	0.9990
0.9566	0.9609	0.9767	0.9925	0.9997
0.9569	0.9619	0.9787	0.9937	0.9998
0.9573	0.9633	0.9809	0.9948	0.9999
0.9578	0.9651	0.9833	0.9956	0.9999
0.9580	0.9667	0.9861	0.9965	0.9999

Channel № 4.

0.9495	0.9527	0.9650	0.9860	0.9969
0.9498	0.9534	0.9673	0.9878	0.9979
0.9501	0.9546	0.9702	0.9896	0.9988
0.9506	0.9556	0.9738	0.9915	0.9996
0.9510	0.9569	0.9760	0.9928	0.9998
0.9515	0.9584	0.9785	0.9941	0.9999
0.9520	0.9606	0.9812	0.9950	0.9999
0.9523	0.9624	0.9843	0.9959	0.9999

Channel № 5.

0.9396	0.9436	0.9575	0.9826	0.9961
0.9400	0.9443	0.9602	0.9847	0.9974
0.9403	0.9457	0.9636	0.9870	0.9986
0.9411	0.9468	0.9678	0.9894	0.9996
0.9416	0.9482	0.9705	0.9909	0.9998
0.9421	0.9500	0.9734	0.9925	0.9999
0.9427	0.9524	0.9767	0.9937	0.9999
0.9431	0.9545	0.9805	0.9949	0.9999

Channel № 6.

0.9684	0.9705	0.9778	0.9910	0.9980
0.9686	0.9710	0.9792	0.9921	0.9986
0.9688	0.9716	0.9810	0.9933	0.9992
0.9692	0.9722	0.9832	0.9945	0.9998
0.9695	0.9730	0.9846	0.9953	0.9999
0.9697	0.9739	0.9862	0.9961	0.9999
0.9700	0.9752	0.9879	0.9967	0.9999
0.9703	0.9763	0.9899	0.9973	0.9999

TRANSMISSION FUNCTIONS
(Arctic Atmosphere)
OZONE

/42.

Channel No 1.

0.9397	0.9438	0.9639	0.9876	0.9970
0.940I	0.9448	0.967I	0.9890	0.9978
0.9404	0.9466	0.9708	0.9907	0.9987
0.94I2	0.9484	0.975I	0.9924	0.9996
0.94I7	0.9506	0.9776	0.9935	0.9998
0.9422	0.9534	0.9802	0.9946	0.9999
0.9427	0.957I	0.983I	0.9953	0.9999
0.943I	0.9602	0.986I	0.996I	0.9999

Channel No 2.

0.9232	0.9283	0.9539	0.9843	0.9963
0.9237	0.9296	0.9580	0.9862	0.9974
0.924I	0.93I9	0.9626	0.9883	0.9985
0.925I	0.934I	0.968I	0.9904	0.9995
0.9257	0.9369	0.97I3	0.99I8	0.9996
0.9263	0.9405	0.9747	0.9932	0.9999
0.9269	0.9453	0.9784	0.9942	0.9999
0.9275	0.949I	0.9822	0.9952	0.9999

Channel No 3.

0.9383	0.9424	0.9633	0.9877	0.9972
0.9387	0.9435	0.9666	0.9893	0.998I
0.9390	0.9454	0.9703	0.9909	0.9989
0.9397	0.9472	0.9747	0.9926	0.9996
0.9402	0.9495	0.9773	0.9937	0.9998
0.9407	0.9524	0.9800	0.9948	0.9999
0.94I2	0.9562	0.9830	0.9956	0.9999
0.94I7	0.9594	0.986I	0.9964	0.9999

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Channel № 4.

0.9295	0.9342	0.9586	0.9862	0.9968
0.9300	0.9355	0.9623	0.9879	0.9977
0.9303	0.9377	0.9666	0.9897	0.9987
0.9312	0.9398	0.9716	0.9916	0.9996
0.9317	0.9425	0.9745	0.9928	0.9998
0.9323	0.9460	0.9777	0.9941	0.9999
0.9328	0.9506	0.9809	0.9949	0.9999
0.9334	0.9542	0.9843	0.9958	0.9999

Channel № 5.

0.9177	0.9233	0.9509	0.9832	0.9961
0.9183	0.9247	0.9552	0.9854	0.9972
0.9187	0.9271	0.9602	0.9875	0.9984
0.9197	0.9296	0.9660	0.9898	0.9995
0.9204	0.9326	0.9694	0.9913	0.9995
0.9210	0.9365	0.9730	0.9928	0.9999
0.9217	0.9416	0.9770	0.9938	0.9999
0.9223	0.9457	0.9811	0.9949	0.9999

Channel № 6.

0.9568	0.9597	0.9744	0.9914	0.9980
0.9571	0.9605	0.9767	0.9925	0.9986
0.9573	0.9618	0.9793	0.9936	0.9992
0.9579	0.9631	0.9824	0.9948	0.9997
0.9582	0.9647	0.9842	0.9955	0.9999
0.9586	0.9668	0.9861	0.9963	0.9999
0.9589	0.9695	0.9881	0.9968	0.9999
0.9593	0.9717	0.9903	0.9974	0.9999

TRANSMISSION FUNCTIONS
(Tropical Atmosphere)
OZONE

/44.

Channel No 1.

0.9676	0.9689	0.9702	0.9840	0.9970
0.9677	0.9691	0.9708	0.9860	0.9980
0.9678	0.9692	0.9719	0.9882	0.9990
0.9680	0.9693	0.9737	0.9905	0.9997
0.9682	0.9694	0.9751	0.9920	0.9999
0.9684	0.9695	0.9770	0.9936	0.9999
0.9687	0.9697	0.9793	0.9947	0.9999
0.9688	0.9699	0.9822	0.9959	0.9999

Channel No 2.

0.9592	0.9609	0.9625	0.9801	0.9963
0.9593	0.9611	0.9633	0.9826	0.9976
0.9594	0.9613	0.9647	0.9853	0.9988
0.9597	0.9614	0.9670	0.9883	0.9997
0.9599	0.9615	0.9689	0.9902	0.9999
0.9602	0.9616	0.9712	0.9922	0.9999
0.9605	0.9619	0.9742	0.9936	0.9999
0.9607	0.9621	0.9778	0.9950	0.9999

Channel No 3.

ORIGINAL PAGE IS
OF POOR QUALITY

0.9686	0.9698	0.9712	0.9852	0.9974
0.9687	0.9700	0.9719	0.9871	0.9983
0.9688	0.9701	0.9730	0.9892	0.9992
0.9690	0.9702	0.9749	0.9914	0.9998
0.9691	0.9703	0.9764	0.9928	0.9999
0.9693	0.9705	0.9782	0.9943	0.9999
0.9695	0.9706	0.9806	0.9954	0.9999
0.9697	0.9708	0.9834	0.9964	0.9999

Channel № 4.

0.9647	0.9661	0.9677	0.9834	0.9970
0.9648	0.9663	0.9685	0.9855	0.9980
0.9648	0.9665	0.9698	0.9878	0.9990
0.9651	0.9666	0.9719	0.9903	0.9997
0.9653	0.9667	0.9736	0.9918	0.9999
0.9655	0.9668	0.9756	0.9935	0.9999
0.9658	0.9671	0.9783	0.9947	0.9999
0.9659	0.9673	0.9814	0.9958	0.9999

Channel № 5.

0.9567	0.9585	0.9603	0.9790	0.9962
0.9568	0.9587	0.9612	0.9816	0.9975
0.9569	0.9589	0.9626	0.9845	0.9988
0.9572	0.9590	0.9651	0.9876	0.9997
0.9575	0.9592	0.9670	0.9896	0.9998
0.9578	0.9593	0.9695	0.9917	0.9999
0.9581	0.9595	0.9727	0.9932	0.9999
0.9583	0.9598	0.9765	0.9947	0.9999

Channel № 6.

0.9773	0.9782	0.9792	0.9890	0.9980
0.9774	0.9784	0.9796	0.9904	0.9987
0.9774	0.9785	0.9804	0.9916	0.9994
0.9776	0.9785	0.9817	0.9935	0.9998
0.9777	0.9786	0.9827	0.9946	0.9999
0.9779	0.9787	0.9840	0.9957	0.9999
0.9780	0.9788	0.9857	0.9965	0.9999
0.9781	0.9789	0.9877	0.9973	0.9999